ELSEVIER

Journal of Electromyography and Kinesiology 11 (2001) III–V

JOURNAL OF ELECTROMYOGRAPHY AND KINESIOLOGY

www.elsevier.com/locate/jelekin

LIST OF CONTENTS

NUMBER 1

A non-MVC EMG normalization technique for the trunk musculature: Part 1. Method development
W.S. Marras and K.G. Davis 1

A non-MVC EMG normalization technique for the trunk musculature: Part 2. Validation and use to predict spinal loads
W.S. Marras, K.G. Davis and A.B. Maronitis 11

Artificial neural network model for the generation of muscle activation patterns for human locomotion
S.D. Prentice, A.E. Patla and D.A. Stacey 19

Quantifying muscle activity in non-ambulatory children with spastic cerebral palsy before and after selective dorsal rhizotomy
J.E. Perry, B.L. Davis and M.G. Luciano 31

Anticipatory postural adjustments associated with lateral and rotational perturbations during standing
A.S. Aruin, T. Ota and M.L. Latash 39

The influence of stimulation frequency and ankle joint angle on the moment exerted by human dorsiflexor muscles
P. Mela, P.H. Veltink and P.A. Huijing 53

Median frequency of the electromyographic signal: effect of time-window location on brief step contractions
C. Larivière, A.B. Arsenault, D. Gravel, D. Gagnon and P. Loisel 65

NUMBER 2

Exercise induced muscle damage and recovery assessed by means of linear and non-linear sEMG analysis and ultrasonography
P. Sbriccoli, F. Felici, A. Rosponi, A. Aliotta, V. Castellano, C. Mazzà, M. Bernardi and M. Marchetti 73

Influence of contraction force and speed on muscle fiber conduction velocity during dynamic voluntary exercise
T. Masuda, T. Kizuka, J.Y. Zhe, H. Yamada, K. Saitou, T. Sadoyama and M. Okada 85

A three-dimensional, six-segment chain analysis of forceful overarm throwing
D.-A. Hong, T.K. Cheung and E.M. Roberts 95

Mechanomyography and electromyography force relationships during concentric, isometric and eccentric contractions
P. Madeleine, P. Bajaj, K. Søgaard and L. Arendt-Nielsen 113

Training-related changes in the maximal rate of torque development and EMG activity
D.A. Gabriel, J.R. Basford and K.-N. An 123

Mean frequency and signal amplitude of the surface EMG of the quadriceps muscles increase with increasing torque — a study using the continuous wavelet transform
S. Karlsson and B. Gerdle 131

EMG activities and plantar pressures during ski jumping take-off on three different sized hills
M. Virmavirta, J. Perttunen and P.V. Komi 141

NUMBER 3

SPECIAL ISSUE

Motor-unit recruitment and firing patterns, and their role in development of chronic muscular pain: analysis methods, mechanisms and models

Editorial
R. Kadefors and G. Sjøgaard 149

EMG signal decomposition: how can it be accomplished and used?
D. Stashuk 151

Evaluation of intra-muscular EMG signal decomposition algorithms
D. Farina, R. Colombo, R. Merletti and H. Baare Olsen 175

Human motor unit recruitment and derecruitment during long lasting intermittent contractions
P. Christova and A. Kossev 189

Motor unit activity during stereotyped finger tasks and computer mouse work
K. Søgaard, G. Sjøgaard, L. Finsen, H.B. Olsen and H. Christensen 197

Motor unit recruitment in the trapezius muscle with special reference to coarse arm movements
M. Forsman, L. Birch, Q. Zhang and R. Kadefors 207

The role of motor unit rate modulation versus recruitment in repeated submaximal voluntary contractions performed by control and spinal cord injured subjects
C.K. Thomas and A. del Valle 217

NUMBER 4

EMG-interference pattern analysis
J. Finsterer 231

Trunk muscle coactivation in preparation for sudden load
K.P. Granata, K.F. Orishimo and A.H. Sanford 247

Discharge properties of human motor units during sustained contraction at low level force
M. Kamo and S. Morimoto 255

Is lower limb muscle synchrony during landing affected by gender? Implications for variations in ACL injury rates
E.J. Cowling and J.R. Steele 263

Spectral profile of superficial cervical muscles
S. Kumar, Y. Narayan and T. Amell 269

Neuromuscular fatigue during maximal concurrent hand grip and elbow flexion or extension
S. Oda and N. Kida 281

The effect of handgrip position on upper extremity neuromuscular responses to arm cranking exercise
E. Bressel, M. Bressel, M. Marquez and G.D. Heise 291

Mean power frequency and amplitude of the mechanomyographic and electromyographic signals during incremental cycle ergometry
S.R. Perry, T.J. Housh, J.P. Weir, G.O. Johnson, A.J. Bull and K.T. Ebersole 299

NUMBER 5

Effects of agonist and antagonist muscle fatigue on muscle coactivation around the knee in pubertal boys
E. Kellis and S. Kellis 307

Quantitative EMG analysis to investigate synergistic coactivation of ankle and knee muscles during isokinetic ankle movement. Part 1: time amplitude analysis
I.S. Hwang and L.D. Abraham 319

Quantitative EMG analysis to investigate synergistic coactivation of ankle and knee muscles during isokinetic ankle movement. Part 2: time frequency analysis
I.S. Hwang and L.D. Abraham 327

Lumbar loading during lifting: a comparative study of three measurement techniques
I. Kingma, C.T. M. Baten, P. Dolan, H.M. Toussaint, J.H. van Dieën, M.P. de Looze and M.A. Adams 337

The effects of four time-varying factors on the mean frequency of a myoelectric signal
A.D. Cechetto, P.A. Parker and R.N. Scott 347

Influence of leg stiffness and its effect on myodynamic jumping performance
A. Arampatzis, F. Schade, M. Walsh and G.-P. Brüggemann 355

The EMG activity and mechanics of the running jump as a function of takeoff angle
W. Kakihana and S. Suzuki 365

Influence of memory demand and contra lateral activity on muscle activity
L. Finsen, K. Søgaard and H. Christensen 373

NUMBER 6

Activation of the VMO and VL during dynamic mini-squat exercises with and without isometric hip adduction
J.E. Earl, R.J. Schmitz and B.L. Arnold 381

Changes in the properties of mechanomyographic signals and in the tension during the fatigue test of rat medial gastrocnemius muscle motor units
E. Bichler and J. Celichowski 387

The assessment of posture control in the elderly using the displacement of the center of pressure after forward platform translation
H. Nakamura, T. Tsuchida and Y. Mano 395

Adaptations in muscular activation of the knee extensor muscles with strength training in young and older adults
C.A. Knight and G. Kamen 405

Electromyographic analysis of a human powered stepper cycle during seated and standing riding
M.S. Miller, J.P. Peach and T.S. Keller 413

Repeatability of maximal voluntary force and of surface EMG variables during voluntary isometric contraction of quadriceps muscles in healthy subjects
A. Rainoldi, J.E. Bullock-Saxton, F. Cavarretta and N. Hogan 425

The short-time Fourier transform and muscle fatigue assessment in dynamic contractions
D. MacIsaac, P.A. Parker and R.N. Scott 439

The influence of geographic variations on the muscular activity in selected sports movements
J.P. Clarys, K. Alewaeters and E. Zinzen 451

2001 Volume 11, List of Contents and Author index I